83734100 0198Ⓐ

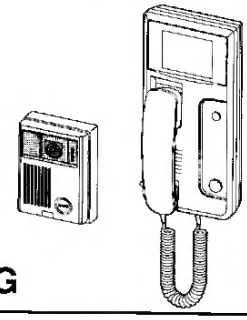
AIPHONE

COLOR SENTRY

COLOR VIDEO ENTRY SECURITY INTERCOM

Models: **KAS-1ED** *(Set of KA-1MD & KA-DA)*
KA-1MD *(Color monitor station)*

INSTALLATION MANUAL



This Manual and the Markings on the product contain various symbols in order that the product can be used safely and properly, and that the installer and user are protected from injury and property damage. The following precautions must be thoroughly read and understood before proceeding.

⚠ PRECAUTIONS ON INSTALLATION & WIRING

⚠ **WARNING**
Negligence could result in death or serious injury.

⚠ **CAUTION**
Negligence could result in injury or damage to property.

Examples of Symbols;

⚠
GENERAL PRECAUTIONS
The △ mark indicates caution statement (incl. danger and warning), which is specifically shown inside.

❗
GENERAL INSTRUCTIONS
The ● mark indicates contents which demands a specific action shown inside or attached.

GENERAL PROHIBITIONS | **DISMANTLING PROHIBITIONS** | **MOISTURE PROHIBITIONS**

The ⃠ mark indicates contents which prohibit a specific action shown inside or attached.

⚠ Warning

1. Do not connect any power source other than specified to terminals +, – on KA-1MD. Fire or damage to the unit could result.
2. Do not open KA-1MD. High voltage is present inside, and it can cause electric shock.
3. Do not change or alter KA-1MD. It can cause fire or electric shock.
4. Make sure wires are connected properly before plugging in power supply.
5. Keep the KA-1MD unit away from water or any other liquid. Fire or electric shock could result.
6. Do not apply any forcible pressure on the video monitor. Damage may result.
7. Keep AC cord and plug away from moisture or dust.
8. Keep AC cord away from being marred or crushed.
9. Do not plug or unplug with wet hands.
10. Do not put any metal into KA-1MD through openings.It can cause fire, electric shock or unit damage.

⚠ Caution

1. Do not install or make any wire terminations while power supply is plugged in. It can cause electrical shock or damage to the unit.
2. Do not manually hold down hook switch to verify chime volume. It sounds very loud and can cause hearing damage.
3. Mount KA-1MD on wall in a convenient location, but not where it could be bumped or jarred.
4. In case of electrical storms, unplug power supply from AC outlet. It can cause fire, electric shock, or power surge damage.
5. Do not install KA-1MD components in any of the following locations, as it may cause the system to malfunction;
   - High or extreme cold temperature area: under direct sunlight, near equipment that varies in temperature, in front of air conditioner, inside a refrigerated area, etc.
   - Places subject to moisture or humidity extremes.
   - Places subject to environmental conditions, such as oil, dust, chemicals, salt, etc.
   - Places subject to constant vibration or impact.
   - Places where noise generating devices such as TV or radio are close by.

⚠ General Precautions

1. KA-1MD equipment, except for KA-DA, is designed for indoor use only. Do not install outdoors.
2. KA-1MD system is not operational during a power failure.
3. In areas where broadcasting station antennas are close by, intercom system may be affected by radio frequency interference.
4. Keep all DC wiring at least 30cm, 20" away from AC 100~240V wiring, fluorescent lighting, or dimmer switches. Otherwise, cross AC wiring at a 90° angle.

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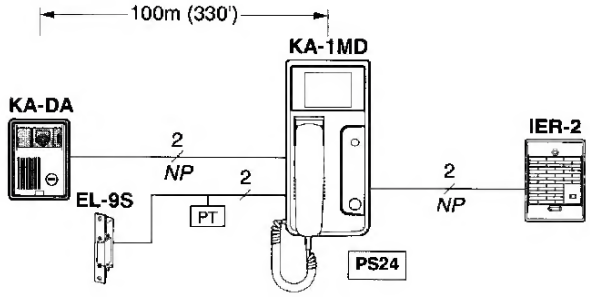
1 SYSTEM OUTLINE & COMPONENTS

KA-1MD is the COLOR SENTRY Video Door Answering System with door release feature. Call extension speaker IER-2 is optional. A sub handset station MK-1SD/B can be added for audio-only communication.

■ Basic System



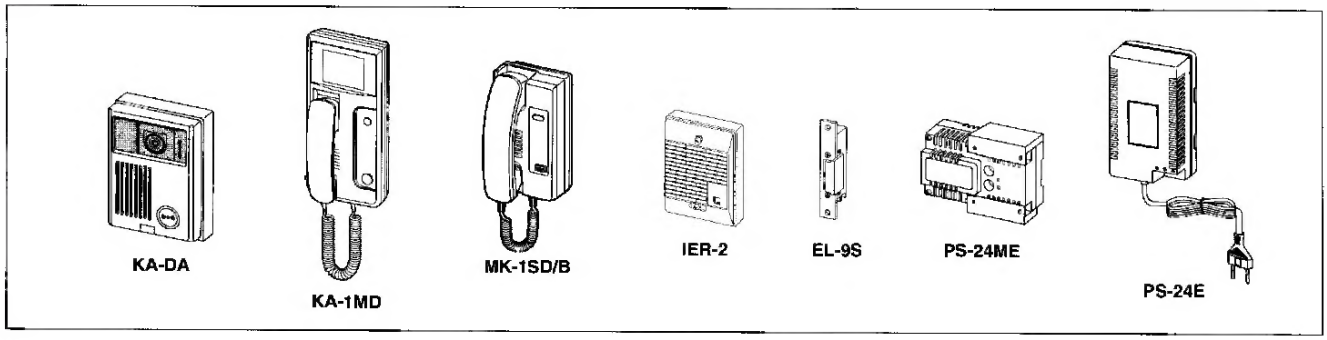
PS24 **PS-24E** or **PS-24ME**

PT AC trans. **PT-1210N** in USA

■ Package Contents

- Color Video system set (KAS-1ED)
- Hexagonal wrench
- Packet of screws
- Installation & Operation Manuals

■ Station Models Available



SYSTEM COMPONENTS:
- Color Video door station
- TFT Color Monitor station
- DC 24V Power Supply

- Door strike
- AC transformer
- Sub handset station
- Call extension speaker
- Auxiliary light relay

MODEL NUMBER:
KA-DA
KA-1MD
PS-24E, AC 120V, 50/60Hz. (UL/CSA)
PS-24ME, AC230V, 50/60Hz. (CE)
or **PS-24E,** AC220-240V, 50/60Hz. (CE)
EL-9S, AC 12V, 0.35A.
PT-1210N in USA
MK-1SD/B
IER-2 *per room station*
MAW-B Powered by PS-24E or PS-24ME of system.

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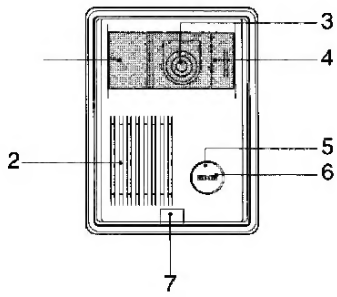
2 NAMES & FEATURES

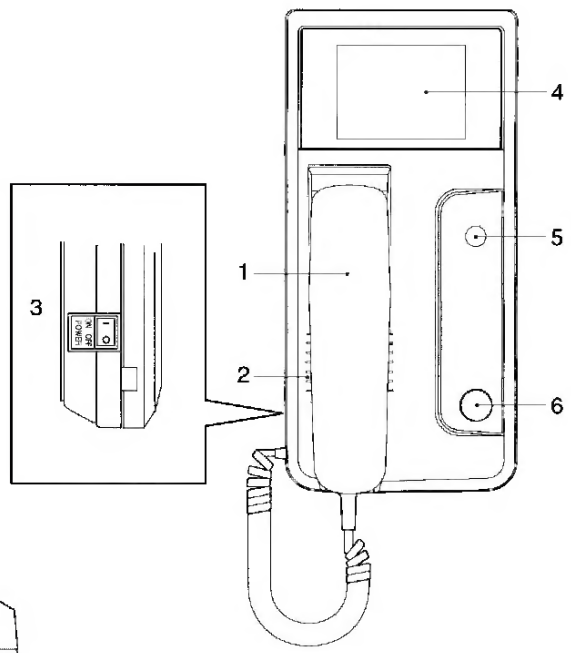
KA-DA

1. White light illuminators
2. Speaker
3. 1/4 inch Color CCD camera
4. Mic.
5. CALL button
6. Locator LED
7. Screw cover
   (tamper proof screw)

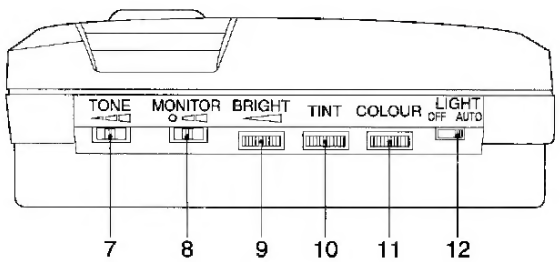


KA-1MD

1. Handset
2. Speaker
3. DC24V POWER switch
4. Video monitor (TFT Color LCD)
5. Door release button
6. MONITOR button
   for door audio & video
7. TONE volume 3 pos.
8. MONITOR volume 3 pos.
9. BRIGHT control
10. TINT control
11. COLOUR control
12. White LIGHT illuminator OFF or AUTO selector



BOTTOM VIEW



■ FEATURES

1. Full Color Video-Door Intercom with Access Control
2. Crisp image with TFT Color LCD monitor and DSP(Digital Signal Processor) for door station
3. Call-in activates audio and video signal when called
4. Hands free audio and video monitoring
5. Auto LED white illuminator spotlights on caller up to 50cm(20") away
6. Backlit CALL button
7. Camera angle upwardly adjustable by 16°
8. Sub handset station (MK-1SD/B)
9. Chime call extension (1 per room station)
10. Auxiliary light control (with MAW-B relay)
11. Up to 100m(330') with standard1.0mm(18AWG) cable.
12. 1-gang wall mounting (both units)

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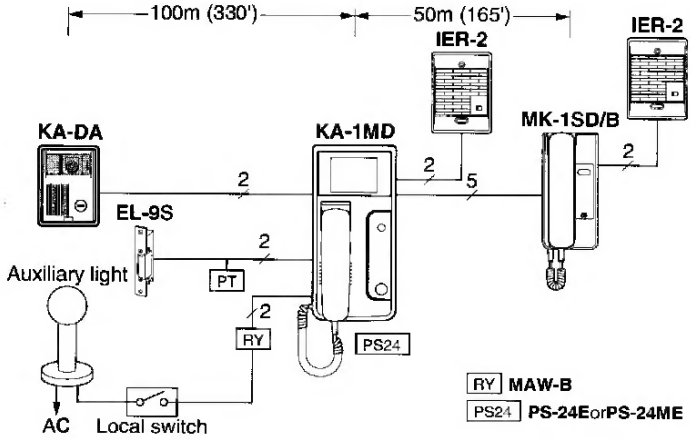
3 INSTALLATION

■ System configuration

KA-1MD is a basic 2-station door answering system. It is optional to add **MK-1SD/B** audio only sub station. Call extension speaker **IER-2** can be attached to each room station.

■ Fully expanded system



■ Wiring

1. Use a parallel cable to connect to KA-DA door station. Do not use any other cable like coax-cable, individual wires, etc.

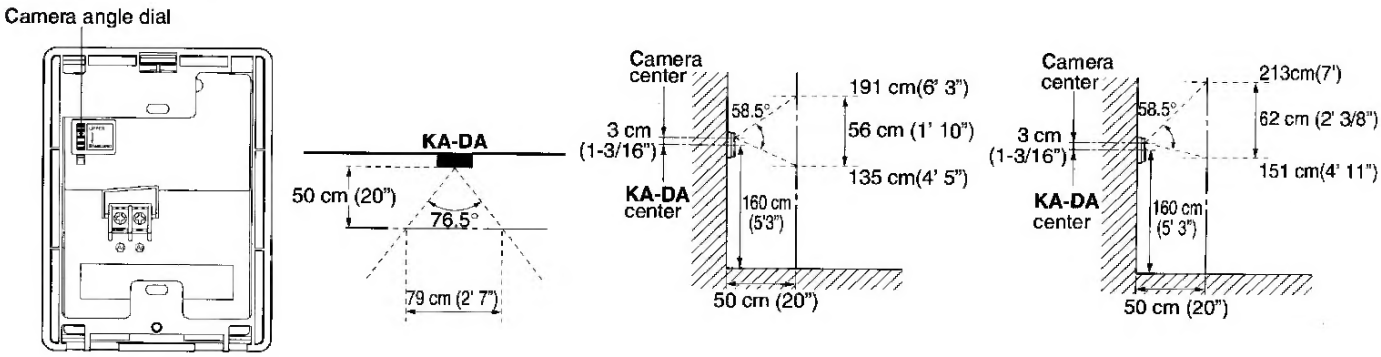
2. When existing chime wires are used, be sure to locate and disconnect the bell transformer. If unused wires exist in the cable, terminate each extra pair with a 120Ω resistor at each end of wires (on audio-only sub station end as well).

3. Cable specifications

1. 0.65mmø to 1.2mmø (22AWG to 16AWG)
2. **Vinyl jacket & PE**(polyethylene) **insulation.**
   For other types, limit use for distance up to 30m (100 feet).
3. Single core conductor. If stranded, solder conductor edge.

4. KA-DA mounting location

1. KA-DA employs CCD camera which is affected by strong light, such as direct sunlight, porch light or street light which comes directly into the lens.
2. Camera angle adjuster
   For low-height mounting, KA-DA is equipped with a 2-position adjustment to position camera angle upward up to 16°.



5. White light illuminator

Set the switch to right AUTO position. When the ambient light becomes low, the white light illuminator turns on automatically. When KA-DA CALL button or KA-1MD MONITOR button is pressed, the illuminators spotlight the caller up to 50cm(20") away from camera. Background scene beyond 50cm(20") fades out.

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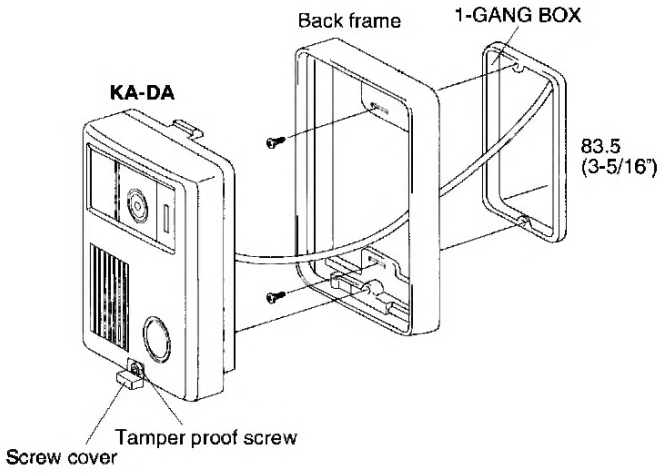
4 MOUNTING

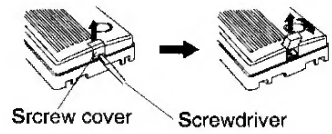
■ KA-DA

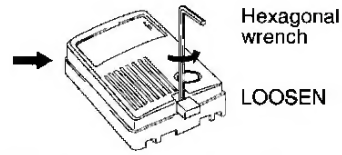
1. Pull the screw cover out and down at bottom.
2. Loosen the tamperproof screw with the hexagonal wrench (provided).
3. Mount back frame to 1-gang box.
4. Terminate wires, and mount KA-DA to back frame, aligning at top.
5. Tighten the screw and replace the screw cover.



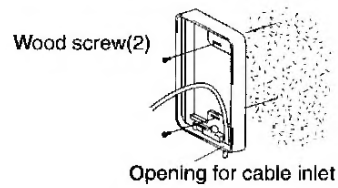
Opening the screw cover

KA-DA Bottom view



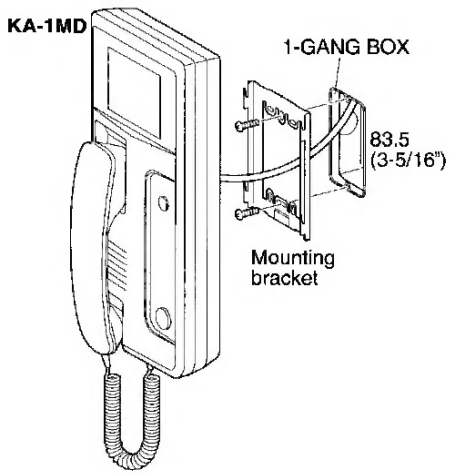


Surface wall mounting



■ KA-1MD

1. Remove the mounting bracket attached on back of KA-1MD.
2. Mount bracket on 1-gang box.
3. Connect 2 non-polarized wires from KA-DA on back of KA-1MD. (A1, A2)
4. Connect 2 polarized wires from power supply. (+, −)
5. Aligning at the marks, insert the prongs of bracket into KA-1MD and slide down until it properly locks.
6. Suggested mounting height of the KA-1MD is that the monitor portion is positioned at approximately 150cm(5') above the floor.



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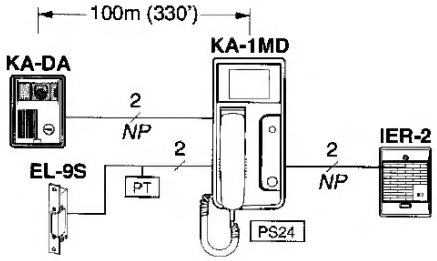
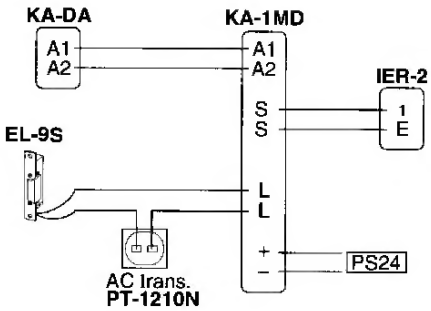
■ WIRING DIAGRAMS

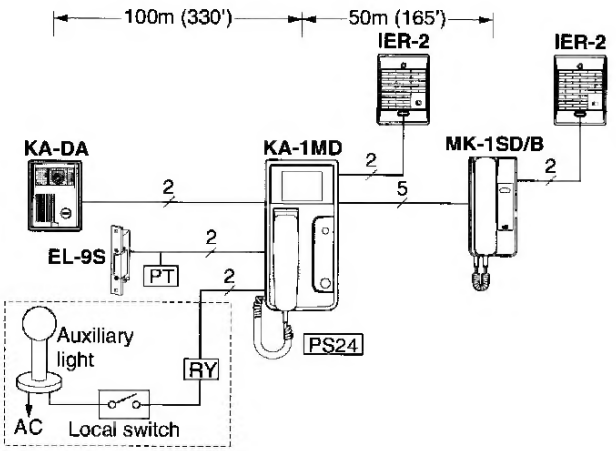
• Basic system

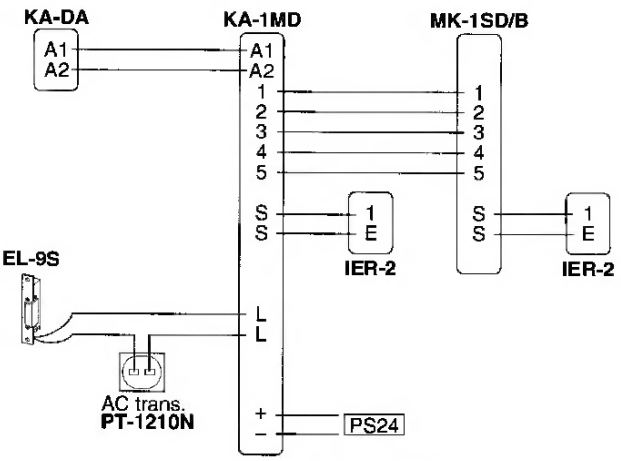




PS24 : PS-24E or PS-24ME

• Fully expanded system



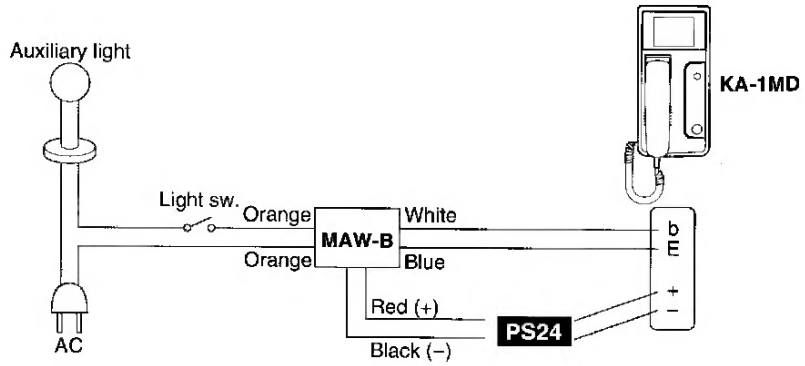


RY : MAW-B

PS24 : PS-24E or PS-24ME

Run door release wires in a separate jacketed cable from the video wires.

• Auxiliary light control



PS24 : PS-24E or PS-24ME

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5 OPERATIONS

1. Receiving a call
Push CALL button on KA-DA. KA-1MD sounds a 4-tone chime, and image is seen.
Audio from door station area is heard from speaker. Lift handset and reply.
At conclusion, replace handset. The image turns off.

- Call-in image timed for approx. 30 seconds when called from KA-DA.
- Communication image timed for approx. 2-1/2 minutes, or when MONITOR button is pressed. To extend, press MONITOR button.

2. Hands free audio/video monitoring
In standby, press MONITOR button. Monitor KA-DA audio & video hands free.
Audio from inside area cannot be heard at door. To conclude, press MONITOR button again.

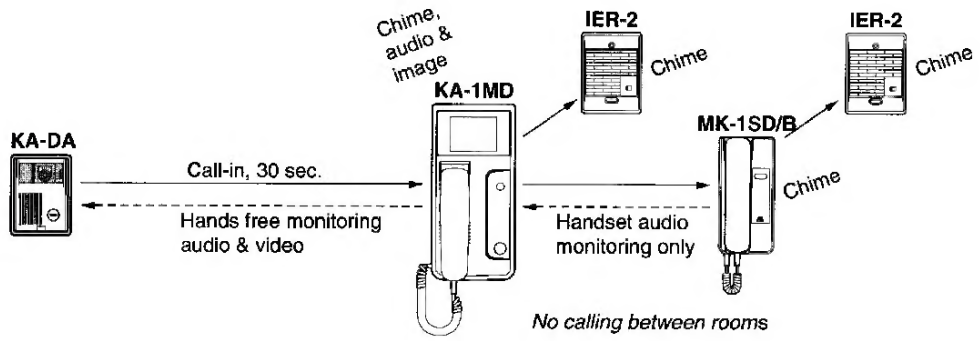
3. Activating door strike
Depress and hold down Key-marked button. Door strike is activated while the button is held down (momentary operation).

4. Sub audio only station MK-1SD/B
MK-1SD/B answers a call from the door, but without video image. Chime sounds, but audio monitoring of KA-DA is not available. Lift handset to hear and reply. If KA-1MD has already answered, replace handset.

5. When handset is off the hook
At end of communication, be sure to replace handset on cradle. Otherwise, the next call will not chime the station. For 2-1/2 minutes, KA-1MD turns on and audio from the off-hook handset will be heard at the door.

6. Adjustments
On the bottom of KA-1MD, six controls are provided (from the left);
TONE volume control ....chime tone, 3 positions
MONITOR volume control ... audio of door station when called or monitored, 3 positions
BRIGHT control .....for monitor brightness
TINT control ..... for basic tone or shade of color
COLOUR control ..... for deeper color
LIGHT illuminator ..... turn on or off white light illumination

■ FUNCTIONS DIAGRAM



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6 TECHNICAL PRECAUTIONS

Operating temperature: KA-DA: -10°C ~ 60°C (14° ~ 140°F) .
KA-1MD: 0°C ~ 40°C (32°F ~ 104°F)

LCD monitor

It must be noted in advance that the TFT color LCD panel, though manufactured with very high precision techniques, inevitably has a very small portion of picture elements that are steadily lit or not lit at all, which is not considered a unit malfunction.

The LCD monitor looks dark in the bright sunlit area, etc. Adjust BRIGHT control to high position to increase monitor luminosity, or reduce ambient lighting.

- When holding handset close to video monitor, the image may vary, but this is not a malfunction.
- KA-1MD unit surface becomes warmer while being powered, but this is not a malfunction.
- Strong light, such as direct sunlight, etc. may cause silhouette on the monitor, but this is not a malfunction.
- When outside temperature lowers sharply after rainfall, etc., the inside of camera may fog up slightly, causing a blurry picture, but this is not a malfunction.
  Normal operation will be restored when moisture evaporates.
- KA-1MD may collect dust on the top of the unit. Clean unit as needed.
- Do not apply any caulking sealant around video door station. The openings at the bottom will help rain to dissipate.

Cleaning

Clean KA-1MD and KA-DA with a soft cloth dampened with neutral household cleanser.

Never use any harsh cleaner or cloth. Do not spray high-pressure water on KA-DA.

7 SPECIFICATIONS (KA-1MD)

- Power source: DC 24V.
- Current consumption: 700mA max. 45mA in standby
- Power supply: Use PS-24E or PS-24ME power supply.
- Call-in: 4-tone chime with adjustable volume
- Call-in image: 30 sec. timed (approx.)
- Communication: Handset, simultaneous
- Communication image: 2-1/2 min. timed (approx.)
- Camera: 1/4 inch Color CCD w/DSP (Digital Signal Processor)
- Image viewing area: 76.5° Horiz., 58.5° Vert. at 50cm(20") in front of camera 79cm Horiz. x 56cm Vert. (2'7"H x 1'10"V).
- Video-monitor: 4 inch TFT colored LCD
- Key-mark button contact: AC12V, 400mA.
- Wiring: 2 parallel, non-twisted wires to door, non-polarized
- Wiring distance:

Diameter	0.65mmø	1.0mmø	22AWG	18AWG
•KA-1MD ~ KA-DA	50m	100m	165'	330'
•KA-1MD to MK-1SD/B	50m	75m	165'	245'

- Dimensions:

	H	W	D (mm)	H	W	D
KA-DA	140	105	41	5-1/2"	4-1/8"	1-5/8"
KA-1MD	305	144	85.5	12"	5-11/16"	3-3/8"

- Weight:

KA-DA: 300g (0.66 lbs.) appox.

KA-1MD: 1.1 Kg.(2.43 lbs.) appox.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna. • Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. • Increase the separation between the equipment and receiver. • Consult the dealer or an experienced radio/TV technician for help.

WARRANTY

Aiphone warrants its products to be free from defects of material and workmanship under normal use and service for a period of two years after delivery to the ultimate user and will repair free of charge or replace at no charge, should it become defective upon which examination shall disclose to be detective and under warranty. Aiphone reserves unto itself the sole right to make the final decision whether there is a defect in materials and/or workmanship; and whether or not the product is within the warranty.

This warranty shall not apply to any Aiphone product which has been subject to misuse, neglect, accident, or to use in violation of instructions furnished, nor extended to units which have been repaired or altered outside of the factory. This warranty does not cover batteries or damage caused by batteries used in connection with the product.

This warranty covers bench repairs only, and any repairs must be made at the shop or place designated in writing by Aiphone.

Aiphone will not be responsible for any costs incurred involving on site service calls.

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AIPHONE EUROPE N.V., ANTWERP, BELGIUM

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